

**ABSTRACT**

An efficient hashing technique uses  $\frac{w^2 + w}{2}$  operations to hash a string "w" words long rather than the  $w^2$  operations of the prior art. This efficiency is achieved by squaring the sum of the key and the string to be hashed rather than forming a product of the key and the string to be hashed.

$$h(m) = ((m + a)^2 \bmod_p) \bmod_{2^t}$$

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